



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,708	07/17/2003	Xuejun Qian	KMC / 304	1525
26875	7590	03/17/2006	EXAMINER	
WOOD, HERRON & EVANS, LLP 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			YOON, TAE H	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/621,708	Applicant(s) QIAN, XUEJUN	
	Examiner Tae H. Yoon	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.  
 4a) Of the above claim(s) 1-32 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 33-57 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1714

Applicant's election with traverse of Group II (claims 33-57) in the reply filed on January 12, 2006 is acknowledged. The traversal is on the ground(s) that the group II is directed to narrower embodiments than the group 1. This is not found persuasive because such situation clearly belongs to the restriction under combination and subcombination.

The requirement is still deemed proper and is therefore made FINAL.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 33-57 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 21-24, 26-29 and 52-56 of copending Application No. 10/440,804. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant composition would inherently yield a bond strength of at least 3 MPa and the instant two

Art Unit: 1714

pastes are obvious modification of the composition of said copending Application No. 10/440,804.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 33-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited "finely divided filler" in claim 33 is indefinite since it is a relative expression. Addition of the particle size taught on page 15 is suggested.

The recited "derivative" and "substituted" in claim 44 are indefinite absent particular functional groups or substituents. The Markush language recited in claims 56 and 57 is confusing and indefinite since the recited "at least 3 MPa" encompasses "at least 5 MPa" for example.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1714

Claims 33-39, 41-44 and 46-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falsafi et al (US 6,818,682).

Falsafi et al teach multi-part dental compositions and kits in abstract. A part A comprises at least one 5-25 wt.% of polyacid, at least one polymerizable compound and at least one oxidizing agent, and a part B comprises water, reactive fillers and at least one reducing agent (col. 3, lines 29-39). The instant polyacid (col. 3, lines 40-60), polymerizable compound (col. 3, line 61 to col. 4, line 60), fillers (col. 5, lines 55-65), oxidizing agent (col. 6, lines 31-41) and reducing agent (col. 6, lines 42-48) are also taught. Various kits containing instructions such as dual barrel syringes and their use such restorative material as are taught at col. 8, lines 40-60 and at col. 3, lines 14-23. DTS of 17.0 MPa and CS of 69.6 MPa taught in table 2 would meet the instant bond strength of claim 56. Falsafi et al teach employing at least one polymerizable compound in part A and part B at col. 3, lines 61-63 and fillers in part A and part B at col. 4, lines 61-64, and example 1 of said table 2 shows employing a polymerizable compound and fillers in both part A and B. The component, t-BDMA is a reducing agent.

The instant invention further recites that the ratio of the first paste to the second paste is greater than 1:1 by volume over Falsafi et al.

It would have been obvious to one of ordinary skill in the art at the time of invention to employ the instantly recited volume ratios of the first syringe barrel and second barrel in Falsafi et al since the disclosure of Falsafi et al encompasses various amounts of components in parts A and B absent showing otherwise.

Art Unit: 1714

Claims 33-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falsafi et al (US 6,818,682) in view of Engelbrecht (US 4,872,936) or Zimmerman et al (US 4,569,976).

The instant invention further recites other acidic moiety and thiourea derivatives over Falsafi et al. However, the instant thiourea derivatives as deducing agents are well known in the art as taught by Zimmerman et al, tables I and II, and Falsafi et al teach thiourea derivatives at col. 6, lines 45-46. Engelbrecht teaches the use of the instant acidic moiety in dental cement compositions at col. 3, lines 35-53.


It would have been obvious to one of ordinary skill in the art at the time of invention to employ further employ polymerizable compound having an acidic moiety of Engelbrecht or thiourea derivatives of Zimmerman et al in Falsafi et al since Falsafi et al teach thiourea derivatives and since Falsafi et al teach employing acidic compounds and since the use of various acidic compounds in dental cement compositions is well known as taught by Engelbrecht absent showing otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tae H Yoon  
Primary Examiner  
Art Unit 1714

THY/March 9, 2006